

Fig. 1

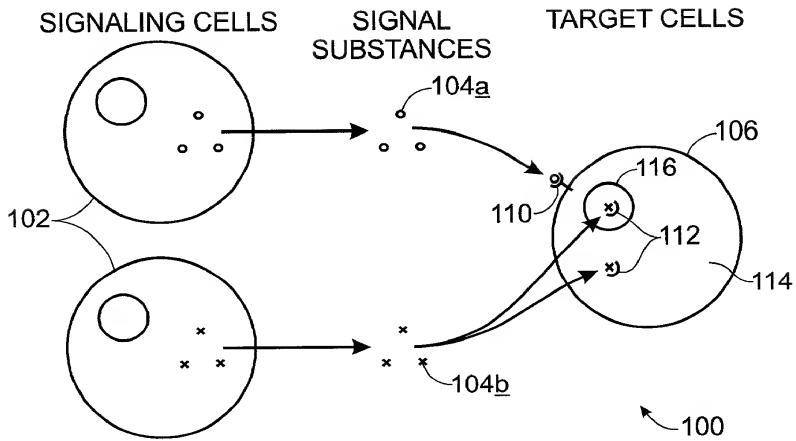


Fig. 2

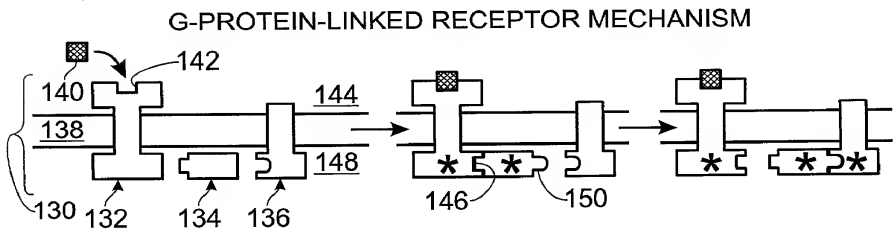


Fig. 3

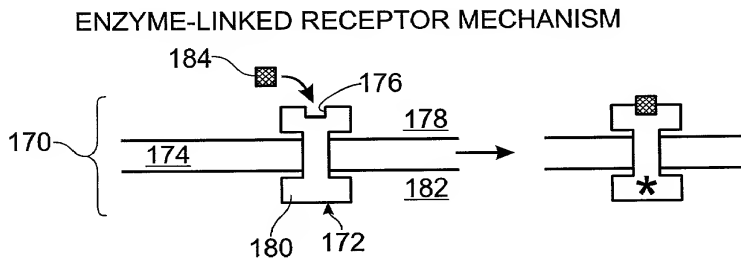


Fig. 4

INTRACELLULAR SIGNALING PATHWAYS

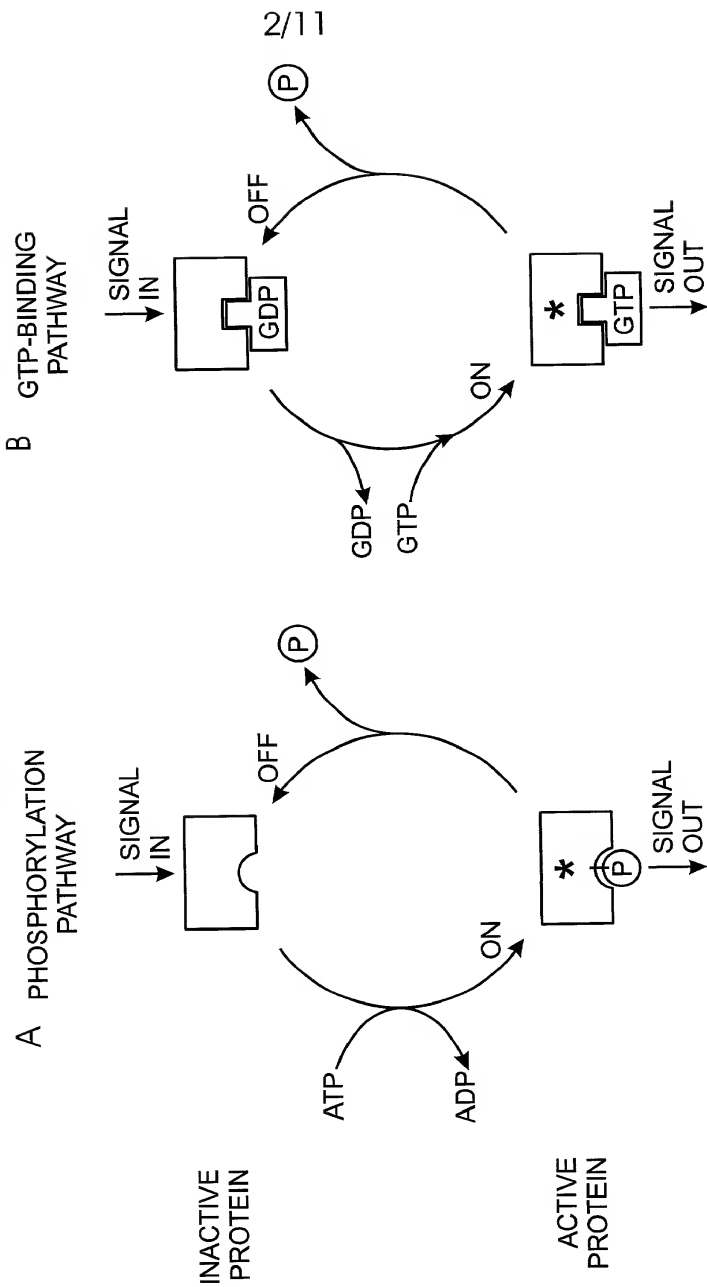


Fig. 5

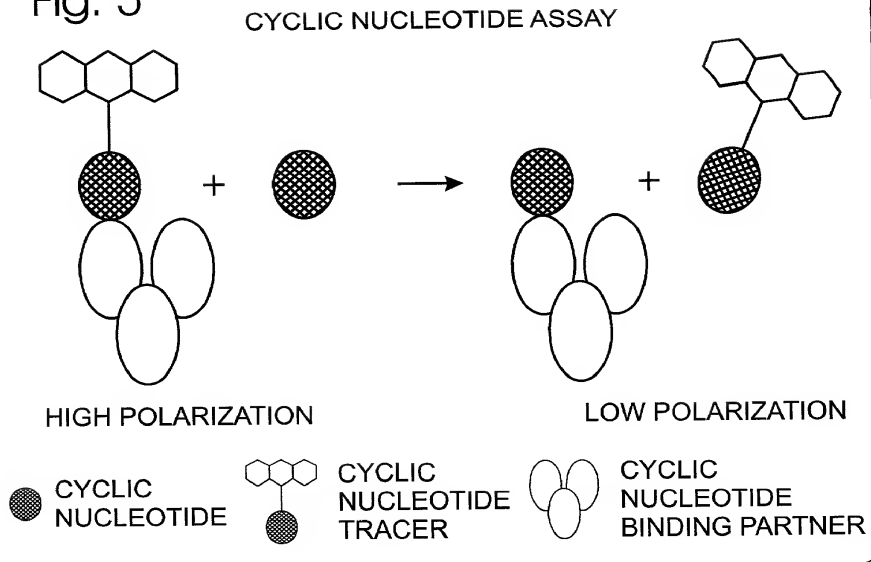


Fig. 6

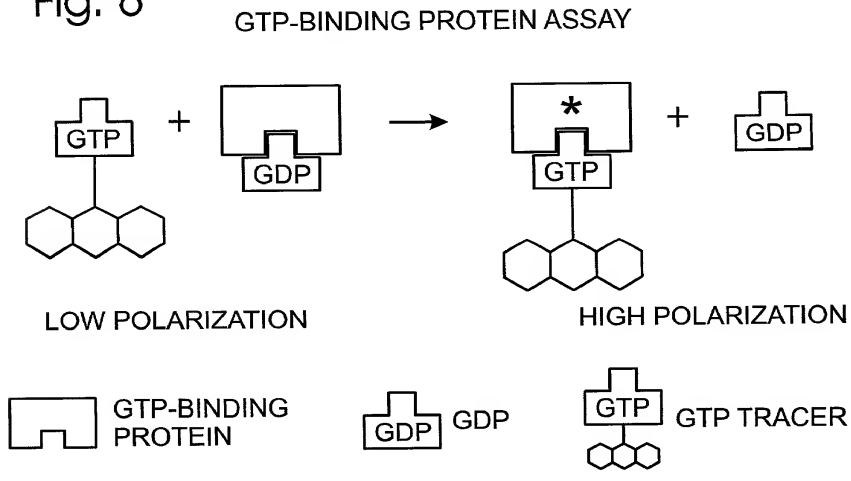
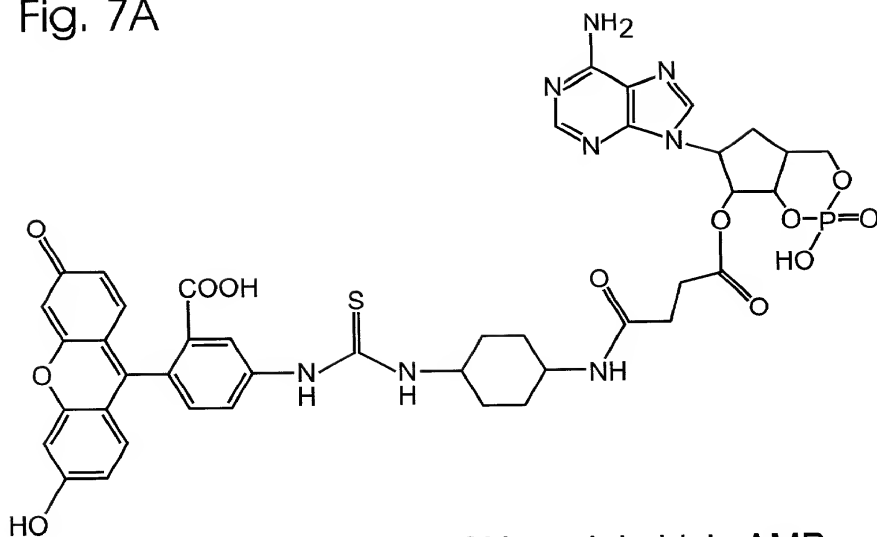
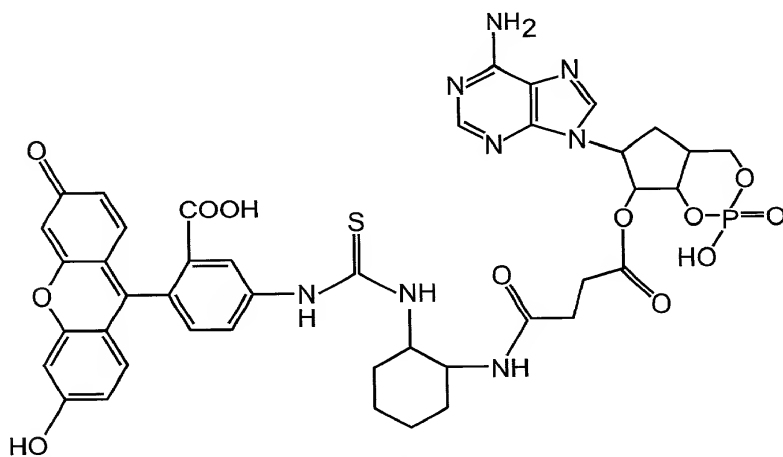


Fig. 7A



fluorescein-ITC-1,4-DACHsuccinimidyl cAMP



fluorescein-ITC-1,2-DACHsuccinimidyl cAMP

Fig. 7B

The chemical structure of compound 7B is a complex molecule. It features a xanthone core (a tricyclic system with two fused benzene rings and a central oxygen atom) substituted with a hydroxyl group and a carboxylic acid group. This core is linked via an amide bond to a cyclohexane ring, which is further substituted with another amide bond. This second amide bond is connected to a nucleoside moiety, specifically a ribose sugar linked to a purine base (adenine) via a glycosidic bond. The purine base has an amino group at the 6-position. The ribose sugar is in its cyclic form, with a phosphate group attached to the 3' carbon.

O=C1C(=O)C(=Cc2cc(O)c3c(c2)oc(=O)c4ccc(OCC(=O)N[C@@H]5CCCCC5NC(=O)CCC(=O)OC6C(COP(=O)(O)O)CO6)n7nc8c(ncn8c7N)nc9[nH]cnc93)c(C(=O)O)c1

Fig. 8A

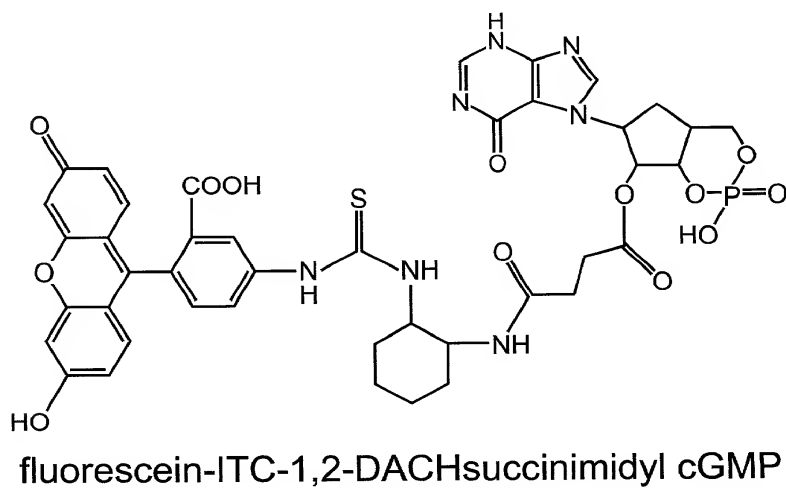
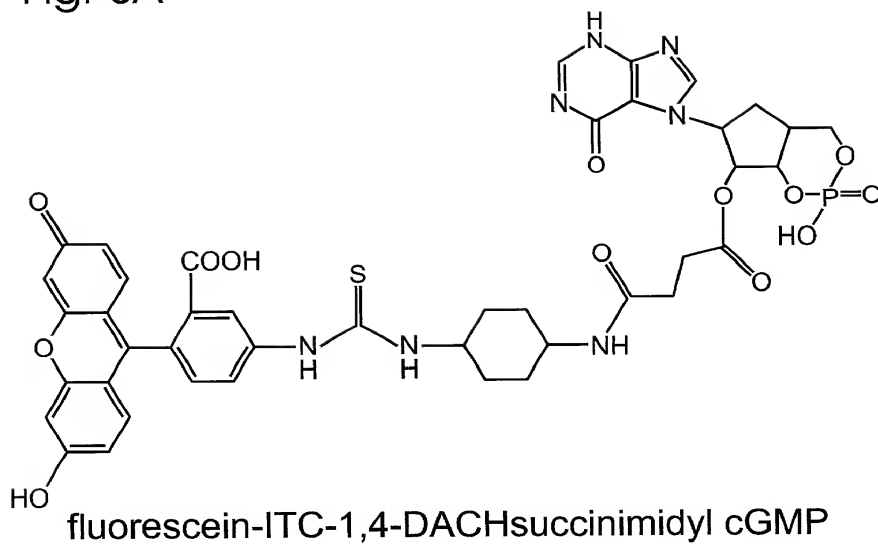


Fig. 8B

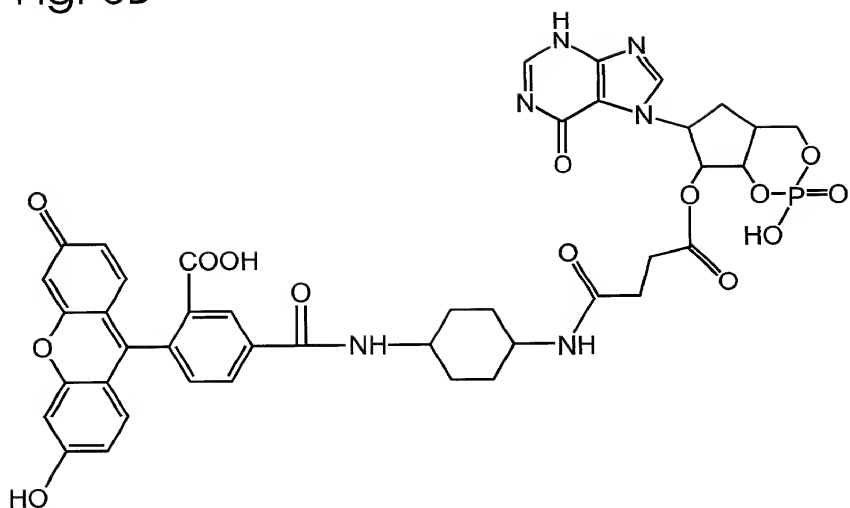
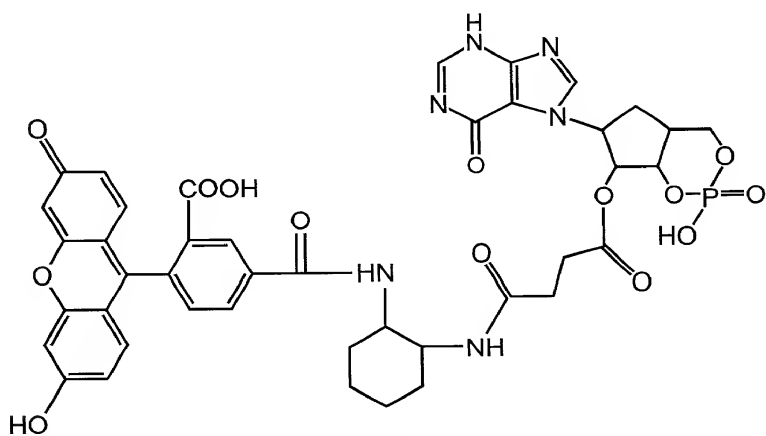
**carboxyfluorescein-1,4-DACHsuccinimidyl cGMP****carboxyfluorescein-1,2-DACHsuccinimidyl cGMP**

Fig. 9A

	1 [cAMP CALIBRATORS]	2 [CONTROLS]	3 [SAMPLES]
A	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 10 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	40 $\mu$ L BUFFER	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 1 10 $\mu$ L cAMP TRACER WORKING STOCK
B	↓	↓	↓
C	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 3.33 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	↓	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 2 10 $\mu$ L cAMP TRACER WORKING STOCK
D	↓	↓	↓
E	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 1.11 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	30 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 3 10 $\mu$ L cAMP TRACER WORKING STOCK
F	↓	↓	↓
G	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 0.37 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	↓	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 4 10 $\mu$ L cAMP TRACER WORKING STOCK
H	↓	↓	↓

Fig. 9B

	1 [cAMP CALIBRATORS]	2 [CONTROLS]	3 [SAMPLES]
I	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 0.12 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	30 $\mu$ L BUFFER 10 $\mu$ L TRACER WORKING STOCK	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 5 10 $\mu$ L cAMP TRACER WORKING STOCK
J	↓	↓	↓
K	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 0.041 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	↓	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 6 10 $\mu$ L cAMP TRACER WORKING STOCK
L	↓	↓	↓
M	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 0.014 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	20 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L cAMP TRACER WORKING STOCK	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 7 10 $\mu$ L cAMP TRACER WORKING STOCK
N	↓	↓	↓
O	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L 0.005 $\mu$ M CALIBRATOR 10 $\mu$ L cAMP TRACER WORKING STOCK	↓	10 $\mu$ L BUFFER 10 $\mu$ L cAMP Ab WORKING STOCK 10 $\mu$ L SAMPLE 8 10 $\mu$ L cAMP TRACER WORKING STOCK
P	↓	↓	↓

Fig. 10

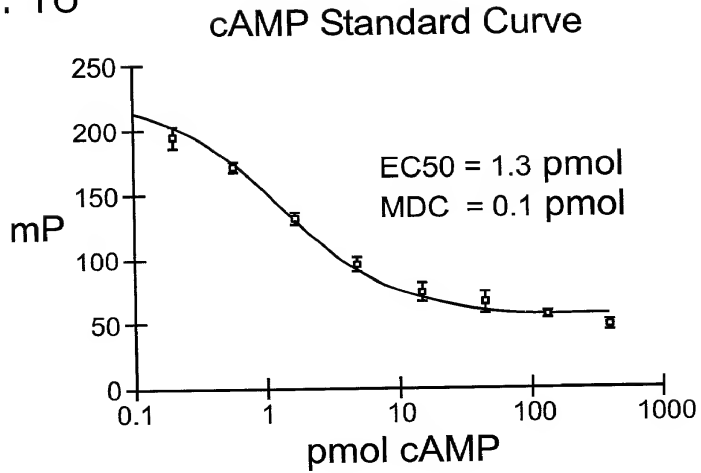


Fig. 11

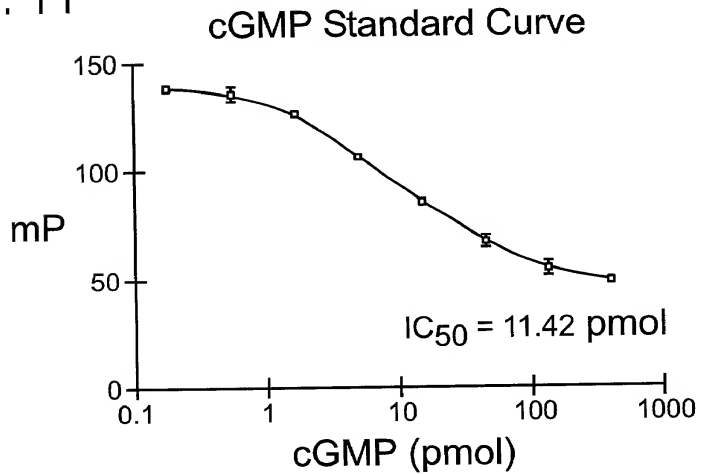


Fig. 12

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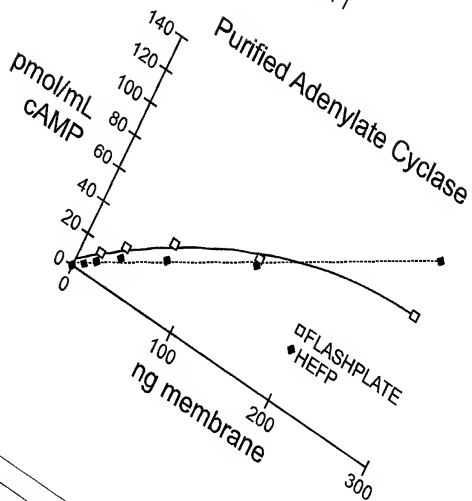


Fig. 13

